



January 2005

[Background](#) | [Oil](#) | [Oil Industry](#) | [Natural Gas](#) | [Coal](#) | [Electricity](#) | [Environment](#) | [Sakhalin Fact Sheet](#) | [Links](#)

## Major Russian Oil and Natural Gas Pipeline Projects

For a summary table, please see [below](#):

### MAJOR PROPOSED OIL PIPELINES:

#### **Druzhba (Friendship) Pipeline Expansion**

The Druzhba pipeline is the largest of Russia's export pipelines to Europe. [Spanning over 2,500 miles](#) with a capacity of 1.2-1.4 million bbl/d, the pipeline is split into two sections: one running through Belarus, Poland and Germany; and the other section running through Belarus, Ukraine, Slovakia, the Czech Republic, and Hungary (see [Map](#)). The Druzhba pipeline system begins in Samara where it collects oil from West Siberia, the Urals, and the [Caspian Sea](#). From Belarus to where the pipeline splits in two at Mozyr, the system is only approximately 50% utilized. After Mozyr, though, both branches are fully utilized, and the area between Belarus and Poland is where work has begun to increase the pipelines' capacity. One proposal to extend the pipeline into Germany (specifically to Wilhelmshaven) would reduce tanker traffic in the Baltic Sea. Also, it would allow for exports of Russian crude oil to the United States via Germany.

#### **Baltic Pipeline System (BPS)**

The BPS came online in December 2001 carrying crude oil from Russia's West Siberian and Timan-Pechora oil provinces westward to the newly completed port of Primorsk in the Russian Gulf of Finland (see map).

Throughput capacity at Primorsk has been steadily increased to around 1 million bbl/d by December 2004. Pending government approval, the pipeline will be expanded to 1.2 million bbl/d.

The BPS gives Russia a direct outlet to northern European markets,

allowing the country to reduce its dependence on transit routes through Estonia, Latvia, and Lithuania.

Unfortunately for the Baltic countries, the growth of the BPS has come at considerable cost, as Russian crude oil which traditionally moved through the Baltic region has been re-routed through the BPS. For example, crude oil shipments have dropped off almost 30% since 2000 at the port of Ventspils in Lithuania. Russian authorities have stated publicly that when allocating the country's exports, precedence will be given to sea ports in which Russia has a stake over foreign ones; in other words, BPS over other Baltic ports (for more information on energy in the Baltic Sea Region, see: [Baltic Sea Region Country Analysis Brief](#))



### Murmansk

The head of Lukoil, Vagit Alekperov, has advocated the construction of a new pipeline and deepwater tanker terminal for several years. It would carry crude oil from Russia's West Siberian Basin and Timan-Pechora basin westward to Murmansk on the Barents Sea. Such a terminal would allow for between 1.6 and 2.4 million bbl/d of Russian oil exports to reach the United States via tankers within only nine days travel time, much faster than shipping from the Middle East or Africa. Liquefied natural gas ([LNG](#)) facilities at Murmansk and Arkhangelsk (to the southeast) also have been suggested, possibly allowing for more oil exports to American markets.

Despite support for the Murmansk proposal from Russian oil companies, American oil companies, and the U.S. government, Transneft (and thereby the Russian government) has approached the project with trepidation. In January 2005, Transneft was considering a shorter western route with a terminus at Indiga instead of Murmansk. Currently, it is unclear whether the Russian government will allow private Russian oil companies to proceed with their plans to construct the port and its associated facilities, or if the project will be handed, either partially or entirely, to Transneft. Some Transneft officials and others have stated that Russia's expanding BP's system as well as a few other key export projects (listed below) will be sufficient to keep pace with growing production. At stake is not only the Murmansk project, but also the Russian government's ability to control the growing oil industry via Transneft.

### Adria Reversal Project

Reversal of the Adria pipeline, which extends between Croatia's port of Omisalj on the Adriatic Sea and Hungary (see map), has been under consideration since the 1990s. The pipeline, which was completed in 1974, was originally designed to load Middle Eastern oil at Omisalj, then pipe it northward to Yugoslavia and on to Hungary. However, given both the Adria pipeline's existing interconnection with the Russian system, and Russia's booming production, the pipeline's operators and transit states have since considered reversing the pipeline's flow, thus giving Russia a new export outlet on the Adriatic Sea.



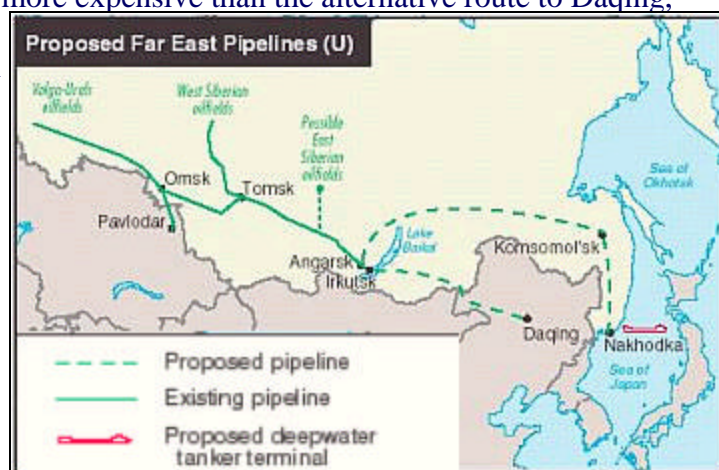
Connecting the Adria pipeline to [Russia's Southern Druzhba system](#) would require the cooperation of six countries (Russia, Belarus, Ukraine, Slovakia, Hungary, and Croatia). In December 2002, these countries signed a preliminary agreement on the project. Since then, however, progress has been slow moving, while the transit states wrangle over the project's details (including [tariffs](#) and environmental issues). Of the six partners, to-date, only three countries, Slovakia, Hungary, and Ukraine are fully ready to implement the

reversal. The most recent to ratify the necessary legislation, Ukraine, approved in February 2004 after denying another highly touted pipeline reversal project, Odessa-Brody. Croatia is particularly worried about the environmental effects of increased oil transports from a port along its coast. Given the relative simplicity of reversing the flow should the countries come to an agreement, some analysts expect that the Adria pipeline could begin transiting roughly 100,000 bbl/d of Russian crude in the first year of reversal (less than 3% of Russian crude oil exports), with an ultimate capacity of approximately 300,000 bbl/d.

### Far Eastern Oil Pipeline: Angarsk-Nakhodka

For about two years, Russian energy officials were unwilling to commit to one of two oil transit pipelines to eastern Asia. Finally, in late 2004, President Putin announced that Russia would commit to building a pipeline route from the Russian city of Angarsk to Nakhodka near the Sea of Japan. The Angarsk-Nakhodka route would extend roughly 2,500 miles, from Angarsk, around Russia's Lake Baikal, to the port of Nakhodka where a new export facility would have to be constructed (see map). Russia estimates that the project will cost between \$15

and \$18 billion, and the pipeline will have a capacity of 1.6 million bbl/d. Although this option was significantly more expensive than the alternative route to Daqing, China, since it covers a greater distance and involves more investment, the Angarsk-Nakhodka route will open up a new Pacific port from which Russian oil exports could be shipped by tanker to other Asian markets and possibly even North America. But, Russian executives realize there is no need to rush exports to the United States. Transneft president Semyon Vainshtok reportedly said that the Marathon terminal in Louisiana could only accept approximately 110 million barrels of Urals or Siberian grade crude oil per year. Although the Daqing option has been abandoned, it is still possible that China will obtain exports via the Nakhodka route. Russian officials and Transneft executives reported in January 2005 that the Nakhodka route would include a pipeline spur from Skovorodino (located about 30 miles from China), which could provide China with Russian oil.



Some hurdles exist to the Nakhodka plan. First, financing the project is challenging. Russia has only obtained Japanese promises of \$7 billion for the project. Also, the pipeline route passes close to the waters of [Lake Baikal](#), a UNESCO-protected site, and [environmental](#) hurdles should therefore be expected.

## MAJOR PROPOSED GAS PIPELINES

### **Yamal-Europe II**

The Yamal-Europe I pipeline (1 Tcf/y), which carries natural gas from Russia to Poland and Germany via Belarus, would be expanded another 1 Tcf/y under this proposal. Gazprom and Poland currently disagree on the exact route of the second branch as it travels through Poland. Gazprom is seeking a route via southeastern Poland to Slovakia and on to Central Europe, while Poland wants the branch to travel through its own country and then on to Germany.



### **Blue Stream**

The Blue Stream natural gas pipeline connects the Russian system to Turkey through a 750-mile pipeline, 246 miles of which extends underneath the Black Sea (see map). Natural gas began flowing through the pipeline in December 2002, under an initial schedule of 71 Bcf per year, which was to increase by 71 Bcf annually. Transport levels in 2004 are estimated at approximately 565 Bcf/d. However, in March 2003, Turkey halted deliveries through Blue Stream, invoking a clause in the contract allowing either party to stop deliveries for six months. After filing suit in Stockholm's International Arbitration court, the two sides came to an agreement in November 2003 and the supply of natural gas to Turkey resumed in December 2003.

**North Trans-Gas Pipeline (or North****European Gas Pipeline)**

The idea of a North Trans-Gas pipeline, extending over 2,000 miles from Russia to Finland and the United Kingdom via the Baltic Sea, was proposed in June 2003 by Russia and the UK. About 700 miles of the pipeline will pass under the Baltic Sea. In January 2004, the Russian government issued an official decree in support of the pipeline's construction and several European oil and natural gas concerns have reportedly shown interest in the project. However, to date there is no definite consortium developing the pipeline. Gazprom's CEO announced in February 2005 that the pipeline would be delayed from its 2007 start date to 2010. The project is expected to cost \$5.7 billion and to transport approximately 0.7-1.0 Tcf of natural gas beginning in 2010. The main advantage of this pipeline is Russia will no longer have to negotiate transit fees with nearly half a dozen countries or pay them in natural gas. A possible spur connection to Sweden has also been considered. Despite great enthusiasm for the project from both sides, some analysts have pointed out that unresolved conflicts between the EU's liberalized natural gas market and Russia's state regulated system could be a hindrance.

**Table 1: Major Russian Oil and Natural Gas Pipeline Projects**

<b>OIL</b>						
<b>Name</b>	<b>Length (miles)</b>	<b>Current Capacity (million bbl/d)</b>	<b>Expected Capacity (million bbl/d)</b>	<b>Location</b>	<b>Completion Date</b>	<b>Notes</b>
Adria Reversal Project	470	0.1	0.3	Central Europe (Hungary, Slovakia) to Croatian Adriatic Port of Omisalj	Unknown - but once approval given--> immediate	Environmental hold-up in Croatia
Druzhba Expansion	2,500	1.2-1.4	same	Russia to Europe via Belarus, Ukraine, Slovakia, Czech Republic	none	Expansion proposed into Germany
Baltic Pipeline System (BPS)	1,600	1	1.24	Exports via Baltic Sea port of Primorsk	2005	
Murmansk	various	n/a	3	Baltic Sea (NE of Primorsk)	none	Project for pipeline and terminal
Taishet-Nakhodka	2,480	n/a	1	Linking from existing pipeline near Lake Baikal to Russian Pacific Coast	2008	Transneft planning spur to China
<b>NATURAL GAS</b>						
<b>Name</b>	<b>Length (miles)</b>	<b>Current Capacity (Billion cubic feet/yr)</b>	<b>Expected Capacity (Billion cubic feet/yr)</b>	<b>Location</b>	<b>Completion Date</b>	<b>Notes</b>
Yamal-Europe II	n/a	1,060	n/a	Second branch from Russia via Belarus and Poland via Europe	n/a	Route undetermined
Blue Stream	750	565	same	Izobilnoye to Dzhugba (RU), under Black Sea, Samsun to Ankara (Turkey)	finished	ENI-Gazprom proposing expansions
North Trans-Gas Pipeline	1300 (737 offshore)	0	700-1000	Russia to Finland, UK via Baltic Sea, with connections to Sweden and Germany	2010	Also called N. European Gas Pipeline

Return to [Russia Country Analysis Brief](#).

*Sources for this report include: Agence France Presse, Asia Pulse, Associated Press, BBC Monitoring International Reports, Central Asia & Caucasus Business Report, Caspian News Agency, Caspian Business Report, CIA World Factbook, Current Digest of the Post-Soviet Press, The Economist, Energy Day, The Financial Times, FSU Energy, FSU Oil and Gas Monitor, Gas Connections, Global Insight, Hart's European Fuel News, Institute of Energy Policy (RU), Interfax News Agency, The International Herald Tribune, International*

*Petroleum Finance, ITAR-TASS News Agency, Mining & Metals Report, The Moscow Times, Oil and Gas Journal, Petroleum Economist, Petroleum Finance Corporation, Petroleum Report, Platt's International Coal Report, Platt's Oilgram News, Polish News Bulletin, PR Newswire, Project Finance, Radio Free Europe/Radio Liberty, Reuters, RosBusinessConsulting Database, Russian Economic News, Russian Energy Monthly, Stratfor, The Russian Oil & Gas Report, Turkish Daily News, Ukraine Business Report, U.S. Department of Energy, U.S. Energy Information Administration, U.S. Department of State, World Gas Intelligence, and World Markets Research Center.*

---

## LINKS

For more information from EIA on Russia, please see:

[EIA: Country Information on Russia](#)

Links to other U.S. government sites:

[U.S. Agency for International Development](#)

[U.S. Department of Commerce, Business Information Service for the Newly Independent States \(BISNIS\)](#)

[U.S. Department of Commerce, Business Information Service for the Newly Independent States \(BISNIS\) - Sakhalin Region](#)

[U.S. Department of Commerce, Country Commercial Guides](#)

[U.S. Department of Commerce, International Trade Administration: Energy Division](#)

[U.S. Department of Commerce, Trade Compliance Center: Market Access Information](#)

[CIA World Factbook](#)

[U.S. Department of Energy, Office of Fossil Energy: International Affairs](#)

[Library of Congress Country Study on the former Soviet Union](#)

[Radio Free Europe/Radio Liberty \(RFE/RL\)](#)

[RFE/RL: Energy Politics in the Caspian and Russia](#)

[Statements and Speeches Concerning Official U.S. Government Policy on Russia](#)

[U.S. Department of State: Background Notes](#)

[U.S. Department of State, International Information Programs](#)

[U.S. Embassy in Moscow](#)

The following links are provided solely as a service to our customers, and therefore should not be construed as advocating or reflecting any position of the Energy Information Administration (EIA) or the United States Government. In addition, EIA does not guarantee the content or accuracy of any information presented in linked sites.

[Columbia University: Russia Subject Index](#)

[Embassy of the Russian Federation in the United States](#)

[Energy Russia: website of the Centre for Energy Policy in Moscow, Russia](#)

[European Union: Energy Strategy of the Russian Federation to the year 2020](#)

[Gazprom](#)

[Global Insight](#)

[Interfax News Agency](#)

[International Atomic Energy Agency \(IAEA\) Power Reactor Information System](#)

[Lonely Planet World Guide](#)

[The Moscow Times](#)

[Prime-Tass](#)

[RusEnergy](#)

[Russia Journal](#)

[Russia Today](#)

[Sakhalin Energy](#)

[University of Texas - Russian and East European Network Information Center](#)

[United Nations Framework Convention on Climate Change and the Kyoto Protocol](#)

[The Washington Post](#)  
[World Bank](#)

---

You may be automatically notified via e-mail of updates for this or other country analysis briefs. To join any of our mailing lists, go to [http://www.eia.doe.gov/listserv\\_signup.html](http://www.eia.doe.gov/listserv_signup.html), and follow the directions given.

[Return to Country Analysis Briefs home page](#)

---

File last modified: February 16, 2005

Contact: Michael Cohen  
[michael.cohen@eia.doe.gov](mailto:michael.cohen@eia.doe.gov)  
Phone: (202) 586-7057  
Fax: (202) 586-9753

[EIA Home](#)  
[Contact Us](#)

URL: file:///V:/PRJ/CABSLAN/russia\_pipelines.html